UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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*Ex parte* Craig A. Andreiko

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Appeal No. _____
Application No. 10/528,036

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# APPEAL BRIEF

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/ Thomas W. Humphrey / September 14, 2010

Thomas W. Humphrey, Reg. No. 34, 353 Date

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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| Appellant: | Andreiko, Craig A. |
| Art Unit: | 3732 |
| Application No: | 10/528,036 |
| Examiner: | Heidi M. Eide |
| Confirmation No.: | 2750 |
| Filed: | December 2, 2005 |
| For: | CUSTOM ORTHODONTIC APPLIANCE SYSTEM AND METHOD |

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## APPEAL BRIEF

This Appeal Brief is in furtherance of Appellants' Notice of Appeal filed July 12, 2010, appealing the final rejections of the Examiner in the Final Office Action mailed April 12, 2010, rejecting claims 26-28 and 45-51 (all pending claims).

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## I. REAL PARTY IN INTEREST

This application is assigned to Ormco Corporation.

## II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

## III. STATUS OF CLAIMS

Claims 1-25 and 29-44 are canceled. Claims 26-28 and 45-51 are pending in the Application, stand rejected, and are now on appeal.

## IV. STATUS OF AMENDMENTS

No amendments have been filed in response to the final office action.

## V. SUMMARY OF CLAIMED SUBJECT MATTER

Appellant's claimed invention is part of an overall orthodontic system that includes components usable for generating digital models of a patient's teeth, for determining dental related anatomy and treatment plans, for generating setups of patient's teeth to be achieved by treatment plans, and for designing, selecting and/or manufacturing orthodontic appliances to carry out treatment plans. Providing orthodontic treatment with an appliance that is suitable for an individual patient generally involves the collection of anatomical and other personal information of the patient, the preparation of the information in a form that can be usefully processed to determine a treatment plan and the properties of an appliance for carrying out the treatment plan, the processing of that information, and the use of the information in making the appliance.

The anatomical and personal information may be stored in a digital file or a folder or other plurality of files is maintained on one or more computers, preferably on

a server located at an orthodontic appliance custom design determining facility. The file or files, in addition to containing the above patient information, may also contain information regarding their treating practitioners and their treatment plans. This information may be maintained, for example, in related database files. A file of records of doctors who are the customers of the facility may contain information identifying the doctor by name and an assigned customer number that is created when the doctor becomes a customer. Such file might be linked to or contain information relating to default preferences of the doctor as to prescriptions and appliance hardware. A file of records of patients of the doctors may contain information with links to the doctor records identifying the patient and an assigned patient number that is created when the patient case is opened by the doctor with the facility. Such files might be linked to various files of other information relating to patients, the patient anatomy, patient medical history, the treatment plan and ultimately the treatment goal, and to data correlated to appliances proposed for the treatment that are the result of other work performed at the facility.

Turning now to the claims, specific support for independent claim 26 may be found as follows:

> *A method of providing a custom orthodontic appliance for treatment of a patient, the method comprising:* (Paragraph [0041])
>
> *maintaining a database, accessible by a computer, and containing data related to each of a plurality of orthodontic practitioners;* (Paragraph [0048])
>
> *storing in the database, information identifying each of the practitioners of the plurality and information relating to treatment plan options including default preferences as to orthodontic prescriptions associated with each of the respective practitioners;* (Paragraph [0048])
>
> *receiving information from an orthodontic practitioner of the plurality for providing a custom orthodontic appliance for a patient;* (Paragraph [0049])
>
> *in response to the information from the orthodontic practitioner, determining parameters for the configuration of a custom orthodontic appliance*

*for the patient based at least in part on the stored treatment plan options associated with the orthodontic practitioner;* (Paragraph [0047]) *and*

*providing to the orthodontic practitioner an orthodontic appliance design for the patient having a configuration that includes the determined parameters.* (Paragraph [0047])

Support for independent claim 46 may be found as follows:

*A method of providing a custom orthodontic appliance for treatment of a patient, the method comprising:* (Paragraph [0041])

*in response to information from an orthodontic practitioner, providing an orthodontic appliance for an individual patient having a configuration that includes appliance parameters based at least in part on predetermined treatment plan options including default preferences as to orthodontic prescriptions associated with the practitioner that have been retrieved from a previously created and maintained database containing data associating a plurality of orthodontic practitioners with treatment plan options including preferred appliance hardware by each orthodontic practitioner.* (Paragraphs [0047]-[0049])

Support for independent claim 47 may be found as follows:

*A method of providing a custom orthodontic appliance to an orthodontic practitioner for treatment of an individual patient, the method comprising:* (Paragraph [0041])

*in response to a request from an orthodontic practitioner to provide a custom orthodontic appliance for orthodontic treatment of an individual patient, providing to the orthodontic practitioner a custom orthodontic appliance for orthodontic treatment of the individual patient designed in part based on patient-specific information associated with the request and in part based on default information of treatment preferences including default preferences as to orthodontic prescriptions associated with the requesting orthodontic practitioner and retrieved from a database containing previously stored default information*

*data associating each of a plurality of orthodontic practitioners with treatment preferences to be applied unless otherwise instructed by a requesting orthodontic practitioner.* (Paragraphs [0047]-[0049])

## VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 26-28 and 45-51 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,315,553 to Sachdeva et al. (*Sachdeva*) in view of U.S. Patent No. 5,991,728 to DeBusk et al. (*DeBusk*).

## VII. ARGUMENT

Appellant will here focus on certain points with respect to the independent claims in this case, namely, claims 26, 46, and 47. As set forth above, Appellant's independent claims are generally directed toward storing, in a database, information related to a plurality of practitioners, where part of that information includes the practitioner's preferences as to orthodontic prescriptions, which the practitioner uses when treating orthodontic patients and creating an orthodontic appliance.

### *A. Independent Claim 26*

Specifically, independent claim 26 requires "storing in the database, information identifying each of the practitioners of the plurality and information relating to treatment plan options including default preferences as to orthodontic prescriptions associated with each of the respective practitioners," and "determining parameters for the configuration of a custom orthodontic appliance for the patient based at least in part on the stored treatment plan options associated with the orthodontic practitioner; and providing to the orthodontic practitioner an orthodontic appliance design for the patient having a configuration that includes the determined parameters".

Throughout the prosecution of this application, the Examiner has relied on *Sachdeva* as the primary reference starting from the first action on the merits. *DeBusk*

was added starting with the second action. Since the addition of *DeBusk*, the Examiner has changed her position as to what is disclosed in *Sachdeva* and what is disclosed in *DeBusk*. In the Office Action mailed on December 5, 2008, the Examiner admitted on page 3 of the Office Action that *Sachdeva* fails to teach "maintaining a database accessible by computer and containing data related to each of a plurality of practitioners, storing in the database, information identifying the practitioners and information relating to treatment plan options associated with the respective practitioners." In the Office Action mailed on March 31, 2009, the Examiner took the position that *Sachdeva* disclosed the claim invention with the exception of "maintaining a database accessible by computer and containing data relating to each of a plurality of practitioners" and "storing in the database, information identifying the practitioners and information relating to treatment plan options including preferences as to one or both of orthodontic prescription and orthodontic appliance hardware associated with the respective practitioners." The Examiner relied upon *DeBusk* to supply the missing disclosure. In response, Appellant pointed out that *DeBusk* also fails to show a database accessible by a computer and containing "treatment plan ... preferences" of practitioners.

*DeBusk* is directed toward a system for tracking and profiling supply usage at a procedural level in the health care field. The system in *DeBusk* is configured to create procedural templates including a list of anticipated supplies which are to be used during a given medical procedure. The supplies used may be customized based on the preferences of different doctors related to a specific medical procedure. For example, *DeBusk* discusses the generation of a bill of materials (BOM) developed at the procedural level which is used to develop a supply list or "bundle" which is applicable to all surgical or medical procedures of a given type. However, individual doctors may require additional and/or specific items that may vary from doctor to doctor. To account for these "special" variations, *DeBusk* discusses "Conditional Bundles," which are simply groups of supplies that are not included in the standard procedural BOM due to their dependence on conditions such as who is performing the procedure. The

conditional bundle information may be stored on a computer with other information about a particular doctor. Appellant amended the independent claims to clarify that the information in the database identifying each of the practitioners included information "relating to treatment plan options including default preferences as to orthodontic prescriptions," not the conditional hardware bundles discussed in *DeBusk*.

In response to this observation and amendment by Appellant, the Examiner now cites *Sachdeva* for teaching a "database, accessible by computer" and "storing in the database information relating to prescriptions." The Examiner is now of the view that the only element of the independent claims that *Sachdeva* fails to disclose is a database containing data related to each of a plurality of practitioners. However, this rejection remains flawed for the reason that nothing in *DeBusk* or *Sachdeva* suggests the development of options for a treatment plan, or the individualization of the same to particular individuals. This was novel with present application and is entitled to be so recognized.

*Sachdeva* discusses a database of orthodontic parameters including such items as age, gender, race, physical geometry of a patient's teeth, mouth structure, bone structure, type of malocclusion, ethnicity, function, etc. *Sachdeva*, col. 5, ll. 46-50. Furthermore, *Sachdeva* discusses that orthodontic parameters can include any human characteristic related to orthodontics that effect tooth positioning, movement, function, stability, appearance, structure of the bones, teeth, gums, pathology, patient's knowledge, medical history, dental history, etc. and any medical characteristics of the orthodontic apparatus that may be stored in a data base system to enhance prediction of a patients orthodontic treatment. *Sachdeva*, col. 5, ll. 50-58. The orthodontic parameters may also include case histories of previously treated patients that are used to determine normal expected treatments, mechanical aspects of the brackets, bands, and wire, mean deviation from normalized treatments, and other statistical information regarding the normalized treatments, and other statistical information regarding the normalized treatment of an orthodontic patient. *Sachdeva*, col. 5, ll. 58-64. Additionally, electronic

patient records of new patients including treatment of those new patients may also be added to the database. *Sachdeva*, col. 5, ll. 64-67.

Finally, *Sachdeva* discusses attempting to match a needed treatment for a current patient with a similar treatment of a previous patient that is stored in a database to integrate into the treatment plan of the current patient. If no match is found in the database, the orthodontic practitioner uses their expertise to set up an initial treatment plan. However, this is not "storing in the database, . . . information relating to treatment plan options including default preferences as to orthodontic prescriptions associated with each of the respective practitioners." Nor are default preferences as to orthodontic prescriptions retrieved from the database. Sachdeva specifically discloses that if there is no previous history that can be applied, the practitioner must use their expertise in generating a treatment plan. Col. 10, ll. 35-52. But the tools that Sachdeva lists are the expertise of the practitioners, care providers, and consultants; and/or near match case histories. There is no mention of default prescriptions that are associated with any of the practitioner, caregiver, or even the consultant. In fact, nowhere in *Sachdeva* is there any disclosure related to "storing . . . information identifying each of the practitioners of the plurality and information relating to treatment plan options including default preferences as to orthodontic prescriptions associated with each of the respective practitioners" in a database. Furthermore, and as set forth above, the tools used for a surgical type procedure in *DeBusk* are not the same as the treatment plan for the patient or the appliance for the patient, and there is no suggestion in *DeBusk* to associate the Conditional Bundles with specific treatment plans or an appliance, nor is there mention of a database to do so.

As set forth above, independent claim 26 requires "storing in the database, information identifying each of the practitioners of the plurality and information relating to treatment plan options including default preferences as to orthodontic prescriptions associated with each of the respective practitioners." It is clear that neither *Sachdeva* nor *DeBusk* have any such disclosure either individually or in combination. Consequently, the combination of *Sachdeva* and *DeBusk* fail to disclose all of the

elements of Appellant's independent claim 26 and a *prima facie* case of obviousness has not been established with respect to independent claim 26. Appellant submits that this rejection is in error and respectfully requests that the rejections of claim 26 be reversed.

*B.* *Dependent Claims 27, 28, and 45*

Dependent claims 27, 28, and 45 depend from claim 26 and are not separately argued.

*C.* *Independent Claim 46*

Independent claim 46 requires "providing an orthodontic appliance for an individual patient having a configuration that includes appliance parameters based at least in part on predetermined treatment plan options including default preferences as to orthodontic prescriptions associated with the practitioner that have been retrieved from a previously created and maintained database." As set forth above with respect to independent claim 26, *Sachdeva* fails to disclose a database including default preferences as to orthodontic prescriptions associated with the practitioner as required by claim 46. Also as set forth above, *DeBusk* fails to disclose a database including default preferences as to orthodontic prescriptions associated with the practitioner. Therefore, the combination of *Sachdeva* and *DeBusk* fails to disclose all of the elements of Appellant's independent claim 46. Consequently, the Examiner has failed to establish a *prima facie* case of obviousness with respect to claim 46. Appellant submits that the rejection is in error respectfully requests that the rejection of claim 46 be reversed.

*D.* *Independent Claim 47*

Independent claim 47 requires "providing to the orthodontic practitioner a custom orthodontic appliance for orthodontic treatment of the individual patient designed in part based on patient-specific information associated with the request and in part based on default information of treatment preferences including default preferences as to orthodontic prescriptions associated with the requesting orthodontic

practitioner and retrieved from a database" similar to claim 46 above. But, as set forth above with respect to claims 26 and 46 above, *Sachdeva* fails to disclose a database including default preferences as to orthodontic prescriptions associated with an orthodontic practitioner. Also as set forth above, *DeBusk* fails to disclose a database including default preferences as to orthodontic prescriptions associated with the practitioner. Therefore, the combination of *Sachdeva* and *DeBusk* fails to disclose all of the elements of Appellant's independent claim 47. Consequently, the Examiner has failed to establish a *prima facie* case of obviousness with respect to claim 47. Appellant submits that the rejection of claim 47 is in error and respectfully requests that the rejection of claim 47 be reversed.

*E.* *Dependent Claims 48-51*

Dependent claims 48-51 depend either directly or indirectly from claim 47 and are not separately argued.

## VIII. CONCLUSION

In conclusion, Appellant respectfully requests that the Board reverse the Examiner's rejections of claims 26-28 and 45-51, and that the Application be passed to issue. If there are any questions regarding the foregoing, please contact the undersigned at 513/241-2324. Moreover, if any other charges or credits are necessary to complete this communication, please apply them to Deposit Account No. 23-3000.

Respectfully submitted,

September 14, 2010
Date

/ Thomas W. Humphrey /

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## IX. CLAIMS APPENDIX: CLAIMS ON APPEAL (SN 10/528,036)

Claims 1-25 (canceled).

26. (Previously Presented) A method of providing a custom orthodontic appliance for treatment of a patient, the method comprising:

maintaining a database, accessible by a computer, and containing data related to each of a plurality of orthodontic practitioners;

storing in the database, information identifying each of the practitioners of the plurality and information relating to treatment plan options including default preferences as to orthodontic prescriptions associated with each of the respective practitioners;

receiving information from an orthodontic practitioner of the plurality for providing a custom orthodontic appliance for a patient;

in response to the information from the orthodontic practitioner, determining parameters for the configuration of a custom orthodontic appliance for the patient based at least in part on the stored treatment plan options associated with the orthodontic practitioner; and

providing to the orthodontic practitioner an orthodontic appliance design for the patient having a configuration that includes the determined parameters.

27. (Original) The method of claim 26 further comprising:

receiving information from the orthodontic practitioner of a treatment plan option for treatment of the patient; and

determining at least one of the parameters based at least in part on the information of the treatment plan option received from the orthodontic practitioner.

28. (Original) The method of claim 26 further comprising:

receiving information from the orthodontic practitioner of a treatment plan option for treatment of the patient; and

determining parameters addressed by the information of the treatment plan option received from the orthodontic practitioner in accordance with that information and determining parameters not so addressed in accordance with information stored in the database.

Claims 29-44 (canceled).

45. (Previously Presented) The method of claim 26 further comprising:

providing to the orthodontic practitioner the orthodontic appliance manufactured in accordance with the orthodontic appliance design.

46. (Previously Presented) A method of providing a custom orthodontic appliance for treatment of a patient, the method comprising:

in response to information from an orthodontic practitioner, providing an orthodontic appliance for an individual patient having a configuration that includes appliance parameters based at least in part on predetermined treatment plan options including default preferences as to orthodontic prescriptions associated with the practitioner that have been retrieved from a previously created and maintained database containing data associating a plurality of orthodontic practitioners with treatment plan options including preferred appliance hardware by each orthodontic practitioner.

47. (Previously Presented) A method of providing a custom orthodontic appliance to an orthodontic practitioner for treatment of an individual patient, the method comprising:

in response to a request from an orthodontic practitioner to provide a custom orthodontic appliance for orthodontic treatment of an individual patient, providing to the orthodontic practitioner a custom orthodontic appliance for orthodontic treatment of the individual patient designed in part based on patient-specific information associated with the request and in part based on default information of treatment preferences including default preferences as to orthodontic prescriptions associated with the requesting orthodontic practitioner and retrieved from a database containing previously stored default information data associating each of a plurality of orthodontic practitioners with treatment preferences to be applied unless otherwise instructed by a requesting orthodontic practitioner.

48. (Previously Presented) The method of claim 47 further comprising:

creating a database including the default information of treatment preferences from each of the plurality of orthodontic practitioners.

49. (Previously Presented) The method of claim 48 further comprising:

designing and manufacturing the custom orthodontic appliance for the individual patient based on the patient-specific information and the default information.

50. (Previously Presented) The method of claim 48 further comprising:

designing the custom orthodontic appliance based in part on patient information relating to the individual patient that had been previously stored in a patient-information database containing patient information relating to a plurality of individual patients.

51. (Previously Presented) The method of claim 50 wherein:

the patient information relating to the plurality of individual patients includes information relating to either patient anatomy, patient medical history, a patient treatment plan, an ultimate patient treatment goal, or a combination thereof.

## X. EVIDENCE APPENDIX

(SN 10/528,036)

None.

## XI. RELATED PROCEEDINGS APPENDIX

(SN 10/528,036)

None.